STANDARD OPERATING PROCEDURE

BEDLOAD SEDIMENT SAMPLING FOR ORGANIC CONTAMINANT ANALYSIS

1.0 SCOPE AND APPLICATION

This standard operating procedure (SOP) describes a method for collecting bedload sediment samples. Bedload sediment is that component of the fluvial sediment load that moves in a rolling or saltating mode. The sediment particles move at a speed that is less than the velocity of the transporting flow and are confined to a layer, a few grain diameters thick, immediately above the stream bed (Gomez, 1991). This SOP emphasizes procedures for collecting bedload samples during precipitation events.

2.0 METHOD SUMMARY

A bedload sampling device is positioned on the stream bottom before a precipitation event, and retrieved afterwards. Collected sediment is removed from the nylon mesh sample bag, transferred to a clean sample jar, and submitted for analysis.

3.0 PROCEDURE

3.1 Equipment and Supplies

- bedload sampler of appropriate weight
  - current < 5'/second = 65 lb. sampler; > 5'/second = 105 lb. sampler
  - stream wadeable = hand-held 4 lb. sampler
- clean (solvent-rinsed) nylon mesh sampling bag; 125 µm or 250 µm mesh recommended
- certified clean wide-mouth glass jars; 100 mL or larger recommended
- spatulas
- appropriate supplies to securely fix sampler to stream bottom (see procedures)
- global positioning system or other means of identifying station location

3.2 Procedure

[Note: steps marked with "**" denote general descriptions of activities that will vary from project to project, the details of which are described in detail in the project-specific Field Sampling Plan.]

1. Establish position of station and record location in the field notebook.** Appropriate procedures could include use of a global positioning system, triangulation on local landmarks, careful notations on a detailed map, etc.